



**National  
Aeronautical  
Laboratory**

**Documentation Sheet**

Document Classification

RESTRICTED

Title : WIND TUNNEL FORCE MEASUREMENTS ON  
1/40 SCALE PSLV STRAP-ON BOOSTERS

Document No.

PD EA 9009

Date of issue:

Author(s) : S. Selvarajan

Contents 52 Pages

Text 4

Figures 24

Tables 24

Division : EXPERIMENTAL AERODYNAMICS DIVISION

No. of copies: 20

External :  
participation

NAL Project No.

NT-0-104

Sponsor : VSSC, TRIVANDRUM

Sponsor's Project No.

Approval : HEAD, EXPERIMENTAL AERODYNAMICS DIVISION

Remarks :

Keywords : Booster Separation, Launch Vehicle

Abstract : Wind tunnel tests were conducted on a 1/40 scale PSLV model to determine the aerodynamic characteristics of the strap-on boosters in the interference flow field. The test rig features a central sting support for the core vehicle and an auxillary support for the instrumented boosters. This document presents the results of wind tunnel tests carried out in the Mach number range 0.5 to 3.1 and the incidence range -6 to 6 deg. The Reynolds number varied from  $1.16 \times 10^6$  to  $2.11 \times 10^6$  based on core vehicle diameter.